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Deception in Play Between Dogs and People

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CHAPTER 12

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Play interactions between dogs and people are characterized by action, reaction, interpretation and prediction. During play, actions are repeated, so that particular "themes" of interaction are developed which define segments of a play session. Such a patterned interaction may proceed as follows: a person throws a ball, a dog retrieves the ball and returns it to the person; the person throws the ball, the dog retrieves it, and so on. We call these thematic patterns of interaction "routines."

Routines need not be, and typically are not, so redundantly patterned that variations do not take place; in fact, routines are often developed, transformed, thwarted, or changed into other routines or activities. In the example above, the dog may keep the ball away from the person, or the person may run after the ball along with the dog. Yet a play routine, as such, leads to some expectations, and hence to the possibility for manipulation and thwarting of expectations. Deception is possible in play because actions, due to their juxtaposition with certain outcomes, are signs for animals of possible future events.

Play routines arise from the interaction of projects. Simpson's (1976) term "project," which refers to a pattern of actions which is repeated so as to calibrate the animal's control over these actions, can be extended to refer to the pattern of actions a player uses in attempts to control the other player's actions. For example, one could view a person and a dog playing "throw and retrieve the ball" as a project of the person to calibrate his or her control over the dog, and as a project

of the dog to calibrate its ball-catching skills. If an animal is to learn the consequences of variations in an action, the animal must perform that action over and over again, while varying it a few parameters at a time. Projects that occur in play can be viewed as experiments of the participants to learn to control the consequences of minor variations in their actions (Simpson 1976).

This analysis explains one of the puzzling attributes of play — that actions in play seem goal-directed yet not end-directed. Typically the participants in play calibrate their performance of components of non-play motivational systems, such as aggression or predation or flight or courtship. Play projects vary around the components of interest at any one time. Thus, while most motivated actions are end-directed, in the sense that the organisms strive to bring the interaction to some sort of resolution, play projects are "center-directed" in the sense that the organism tries to vary the interaction narrowly around the components of interest to it. The center-directedness of play projects implies that each participant to the interaction must try to maintain the other within limits appropriate to its project. Hence, the routines of a play session are circumscribed within boundaries determined by the projects of the participants.

Although players' activities are pursued in common, nothing about these activities requires that the participants share common goals. When a person plays with a dog, each attempts to determine which project the play session will be around. For example, a dog may experiment with how near to a man it can bring a ball without losing it. The man, if he gets the ball, may respond to the dog's actions by teasing the dog with the ball. Each must maintain the other within limits or neither can engage in its own project. If the dog permits the man to take the ball away easily, then it gets no experience with the man's reaching and grabbing; if it strays too far away, the man may give up, the game will end, and the dog still gets no chance to practice. The dog must keep the man within limits if it is to have any game to play at all. The man must also keep the dog within limits. If he is too successful at keeping the ball from the dog, the dog may lose interest, and the man loses his chance to experiment with teasing; if the man always lets the dog get the ball, then he does not get to explore the boundaries of his own abilities in relation to the dog's abilities. Other playing organisms have goals which are inherently difficult to fulfill when shared by a play partner and which thus serve to maintain the interchange. For example, chimps sometimes have the play goal of "tickling without being tickled" (Fagen 1981:410); other animals, of "biting harmlessly without being bitten" (p. 410).

If each participant is to engage in its own project, it must respond to the other so as to bring about the opportunity of engaging in its own project. But it must also behave in such a way as to offer opportunities for the other to engage in *its* project. The play routine engaged in by the two participants is thus a compromise between the ideal version of the projects each would enter into if each could completely control the other. For this reason, play becomes a rich field for the occurrence of deception. When the projects of the two players are not compatible, each player attempts to entice the other into a routine which favors opportunities for the first player to engage in its own project. The enticement may take many forms, but in general it consists of giving the other player the impression that the opportunity to carry on its own project is imminent.

In this chapter we present examples of protocols from an ongoing study of dog-human play. The study is a rich source of examples of deception by both humans and dogs. The protocols are taken from video-taped observations of people playing at different times with their own or another's dog. The descriptions can be viewed as "outlines" of the general body movements and actions of the players. In all cases in which a ball was used, it was supplied by the experimenter; all other objects were brought by the players. We provide examples of play to allow the reader to examine the players' deceptions in their immediate context, as well as to elucidate the types of deception employed in relation to the notion of projects.

The first example of deception in play occurs between a man (M) and his female dog (D) and shows two players engaged in different, but complementary, projects: the dog attempts to obtain the ball from the man; the man attempts to entice the dog into trying to get the ball from him.

> D and M are next to and facing one another, M on his knees and bent over on his elbows, D sitting up. D has the ball in her mouth and is biting on it. M looks at D. D moves her front legs forward, lies down, and bends her head as M moves his head down toward her and bends over. D drops the ball and moves her mouth toward it and M moves his left hand to the ball and takes it from near D. M pushes, with his right hand, the ball so that it rolls, and then he captures it with his right hand. D visually follows the ball, but then seems intent on moving her tongue and jaws (perhaps chewing or licking grass). M moves the ball on the ground toward D with the thumb and index finger of his left hand, then leans on his left elbow as he moves the ball off the ground with the same fingers. As M shows D the ball and

moves it back to the ground, D continues to move her tongue and jaw until suddenly D stops, simultaneously closing her mouth and fixating on the ball. Both participants remain motionless for a brief time, during which M holds the ball steady, and then D extends her left paw at the ball while turning her head, with her mouth open, to the right to grab the ball with her mouth. As D moved, M pulled the ball away from D. D moves her back leg forward, and M moves the ball closer to D. D looks to her left a bit, but remains looking at the ball. Another pause, then again D lunges her head forward toward the ball, turning her head to the right with her mouth open, and M moves the ball away. D retracts, M moves the ball closer, D again lunges with her mouth open at the ball, which M moves past her mouth.

During the same interaction, the man again deceived the dog. As in the first example, the man makes the availability of the ball obvious to the dog by holding the ball steady; in enticing the dog with the ball, the man uses his knowledge that the dog is interested in obtaining the ball to manipulate the dog's expectations and behavior.

D is standing, M is kneeling. M rubs D on her stomach and back as D bites on the ball in her mouth. M moves both his hands to the tops of his legs and looks at D, whose head is bent downward and who is manipulating, with her mouth, the ball on the ground. M moves both hands around D's head and grabs the ball from D. M sits up as he moves the ball above but near his legs with both hands, and D's gaze follows the ball. M moves the ball toward D with his right hand. D attempts to grab the ball with her mouth as M moves his hand higher. M, twisting his torso and turning his head to the right, moves the ball back further from D, and D follows and again attempts to grab the ball in her mouth. M moves the ball higher and has his arm bent 45° at his elbow as if to throw the ball, and D follows the ball with her gaze, M staring at D's face. M pretends to throw the ball: he sharply moves the front of his arm forward in a circular motion similar to that used in throwing but he continues the movement with the ball in hand rather than letting the ball go, while D runs in the direction the ball would have gone, looking ahead of her for it and then to her left side. (D now faces away from M.) M moves the ball from his waist to near his neck, in front of him, turns the ball with his fingers, and then whistles. D turns her head toward M and then turns her body as M throws the ball into the air. The ball drops and M catches it on a bounce while D watches.

Here a man pretended that he was about to throw a ball far, and a dog predicted that this pretend action would result in the ball's arriving behind where the dog was, so the dog turned and waited for the ball to land. Deception is evident in this interaction because the person's action was appropriate to throwing the ball far, the dog reacted to what the action seemed designed to achieve, but the person did not follow through on his action. One project of the person was to experiment with methods of fooling the dog.

Deception can be embedded in an ongoing routine which will prime the partner to expect a certain outcome. An interaction of mutual rag-pulling in which the rag was returned to the dog's mouth if the woman pulled it out preceded the next example, which shows a woman (W) manipulating her male dog (D) with a rag.

W pulls the rag from D's mouth by prying open his jaws with her hands. (D's mouth remains open for most of the interaction.) W holds the rag in the air. D immediately faces and attends to it, runs toward the rag, leaps at it with his front legs as W moves the rag higher. As D comes down on his front legs, W lowers the height of the rag. D leaps, with his front legs, at the rag again, W raises the rag, D comes down on his front legs, W lowers the rag to D's mouth level, moves the rag quickly past D's mouth, then moves the rag back toward D, who bites at it, then away from D, then up high, as D leaps with his front legs in the air near the rag. As D comes down, W moves the rag closer to D, D moves toward the rag, W again runs it past D's mouth area, but D does not go after it, just looks at it with his mouth open. W holds the rag steady and within D's reach, D moves toward the rag and tilts his head to the right, biting down near the end of the rag. W pulls up on the rag, shakes it, D looks up at it and jumps with his front legs at it.

In this and the first and second examples, each person had a project of enticing the dog to grab for an object, while each dog had a project of obtaining and chewing or keeping the object in her or his mouth. Holding an object out of reach after a period of maintaining the object within reach was a commonly observed ploy of humans in play. Similar routines developed with different objects — a ball, a rag, a twig, even an arm. Sometimes, in order to entice the dog, it was allowed periodic interactions with the object, but then the object was taken away.

Although a dog usually cannot hold an object higher than a person can reach, it has other strategies for withholding an object from a person. The fourth example shows a male dog engaging in a project of

enticing a woman to persist in her attempt to obtain a ball the dog has in his mouth. (This woman and dog had not interacted prior to this play session.)

> W and D face one another. In D's mouth is a ball, which W has been trying to obtain. D moves to his left, W mirrors the move's direction, D moves to his right. W faces the camera, points to D and says "Boy, he's playful, huh?", as D bites on the ball. W turns back to D, and they face one another. W reaches her right hand out to D, W claps, D lowers his body (back knees bent), W bends her body at the waist. D moves to his left as his body rises, W mirrors D's direction. D's body is now perpendicular to W's line of vision. D turns to face W, W claps as she moves toward D, D moves closer to W. (D faces a small area between W and a fence; a large area for movement away from W is available behind D and to his left.) D bows his head and puts his rear up, then lifts his head as W's left hand reaches toward him. D moves to his left, W turns her body toward D's new position and points to the ground with her left hand, says in a high-pitched voice "Come on," and reaches her left hand out. D moves his head down, W moves her hand closer to D, D pulls his head back, W moves her hand closer still, then D pulls back and runs between W and the fence as W watches him.

Here the dog appears to calibrate his ability to get away from the woman when he was in a tight spot: he could have moved away from the woman and fence, but instead waited until he could, with little trouble from the woman, go between her and the fence. Another project of the dog appears to be to keep the ball while maintaining the woman's project to obtain the ball. Fagen (1981:410-11) describes, in the play of animals of various species, similar projects, which he calls "tactics," which maintain an interaction by thwarting another's goals.

Exposure to actions which lead to false predictions may also lead players to predict the outcomes associated with the faked action, either because of recent exposure to faked actions or because of remembered faked actions. Thus, players may hesitate if a previously faked action is begun, or they may simply wait until the action is completed. The effect of a dog's recent experience with a faked action was evident in the third example above, where the dog did not move to obtain the rag when the woman moved the rag past the dog's mouth.

Play partners may also remember, from prior play sessions or everyday experiences, that actions can be faked. The fifth example shows a female dog inhibiting her response to a woman's faked throw.

Prior to the interaction, the two players had been engaged in a routine in which the woman threw the ball and the dog retrieved the ball, though did not necessarily give it up easily. (This woman and dog had never interacted prior to this play session.)

> (W and D face one another throughout most of this interaction.) D walks, with a ball in her mouth, toward W as W walks toward D. W bends at her waist as she moves toward D and extends her right hand to take the ball from D's mouth. Fully bent over, W moves her left hand to the ball in D's mouth. D moves her head to her right, and W's both hands move D's head further to D's right in W's attempt to get the ball from D's mouth. D growls. W gets the ball from D's mouth and maintains the swing of her hands (the ball in her right hand) as D visually follows the ball. Quickly, W moves the hand with the ball to her right (a direction opposite to the previous direction) and D runs toward the ball while W moves the ball higher. W has the ball above her head, and is showing the ball to the dog. D continues to gaze at the ball. D, open mouthed, jumps fully off the ground at the ball as W moves the ball from a high to a low position as she moves it behind her back. D lands and looks at W. W, switching the ball from her right to left hand behind her, bends at her waist toward D, then W brings her left hand with the ball out from behind her back, moving the ball from a low to a high position, and shows the ball to D, who maintains her gaze on the ball. D jumps slightly forward, preparing to run (as if expecting that W is to throw the ball), as W, straightening up somewhat, moves the ball in her left hand behind her body; D falls. (Note that W's action of moving her arm with the ball behind her back is similar to her wind-up for throwing the ball.) W holds the ball in the fingers of both hands behind her as D lowers the front of her body. W switches the ball to her right hand as she straightens up and moves the ball out from behind and pretends to throw the ball. D jumps slightly, moving into a position to run (as if expecting that W is winding up to throw the ball) but does not run off, instead keeps her gaze on the ball. W bends at the waist as her right hand moves behind her again. W pauses, then throws the ball from her right hand as D moves toward it (with her mouth open). The ball shoots past D's mouth, and D turns and runs after the ball.

In this interaction, the dog appeared to expect that the woman was going to throw the ball when the woman, in an action similar to her preparation for throwing, was moving the ball behind her back. The

dog's attentive gaze on the position of the desired object helped the dog to avoid the later deception of the woman faking a throw of the ball. This gaze on the object is consistent with the suggestion of Mawby and Mitchell (this volume) that one can avoid deception (in sports) by focusing on aspects of the deceiver's behavior the deceiver cannot fake.

The deception involved in dog-human play would not be possible unless dogs and people viewed one another's play behavior as goal-directed. That is, dogs and people can deceive because each can assess the project of the other. The claim that these organisms have expectations and recognize projects and goals does not entail that the players are conscious of the other as a goal-directed agent, but merely that in each particular interaction the player has knowledge of the other's likely end or future state. (See Ryle's [1949] distinction between "knowing how" and "knowing that.") Similarly, Buytendijk ([1936] 1973:206) suggests in a comparison between deception in the play and fights of dogs and deception in sports that "it is not well-thought-out reason that directs the action, but an unconscious realization of the possible movements of the adversary." With knowledge of the other player's likely future actions, each player can bring about actions consistent with or at cross purposes to that future state. Thus, for example, a dog may interpret a human's movement toward a ball as an indication that the person is going to take the ball and, as a result of this knowledge, the dog may grab the ball in its mouth before the person can grab the ball. The interchange presented in this sixth and final example occurred just prior to the bout presented in the fourth example. The dog's project involved enticing the woman, who wished to obtain the ball, by moving close to the woman yet not close enough. One interesting aspect of this interchange is the project which developed of the dog dropping the ball near the woman: the dog apparently accidentally dropped the ball once and lost it to the woman, then a little later directed the ball away from the woman and grabbed it before the woman could, and then a bit later threw the ball toward the woman and grabbed it before she could get to it. By placing the ball closer to the woman, the dog appears to be engaging in a project of testing his agility at getting the ball before the woman does in a situation where both the woman and the dog have a chance of getting it. This play interaction occurred just prior to the bout presented in the fourth example.

> W and D are facing one another. W moves, with her arm reaching out and her waist bent, toward D, who is down on the ground, with the ball in his mouth, shaking his head up and down and biting on the ball. As W reaches close to D's face, D moves his head away, gets up, and runs from W, yet keeps her in sight. As W turns and runs toward D, D turns and runs back toward W, who claps, says "Come on," puts her hands on her legs, and straightens up. As D moves closer to and then circles W, W pivots to go in his direction, claps her hands, and says "Come on" as she runs after him. After moving beyond W, D curves back to face W, and the ball falls out of his mouth. D attempts to stop the ball by pouncing on it with both paws and then to grab it in his mouth. W, bending at the waist, continues toward D. D sees W, and pulls slightly away from the ball, but then jumps back to it as W bends over and reaches for it. W grabs the ball with a swoop of her left hand, which travels to her right shoulder, and D follows the ball with his gaze. W brings her left hand back toward D, shakes the ball at him, and then W faces away from D and throws the ball as D follows the ball with his gaze and begins to run after the ball. D pounces on the ball with his paws, and then grabs it in his mouth. W claps and says "Good boy" as D turns to run back toward her. W side-steps toward D as he curves around her. W grabs at the ball in D's mouth, and D pulls away and circles in the opposite way around W. W claps, says "Give me, come on," claps. W pivots to follow D, who side-steps further away, but then turns his body to face W, who is running toward him. W claps and bends at the waist as she nears D, who remains somewhat still, shaking his head as he bites on the ball. As W reaches out for the ball, D lowers his head and front legs, and then turns his body to get away from W by throwing himself to his right. As he does this, he snaps his head and sends the ball out from his mouth in a direction away from W. D pounces on the ball with his paws, and then grabs it in his mouth as W moves toward him. D turns toward W, who moves her hands out a bit in an aborted reach, and D circles around W, who turns to follow him. D turns in toward W, who is bending at the waist, and D lowers his head and shakes his bead back and forth. W moves in slowly toward D, who moves into a play bow position and pulls away from W. W claps and says "Oh ho ho ho" and runs after D as D runs away. W runs after D and says "Ah ha ha ha ha" (as if to say "I've got you now!"). D turns toward W and bounds off to the right to circle around W again. W pivots, says sharply "Give me that ball," and turns to gaze at D as he runs by, D turning sharply to pass next to W. D turns back toward W, D shakes his head back and forth. W claps and says "Come on." As D moves toward W's right, she moves to her right, effectively blocking his continuing past her on the right, because there is a fence there. D moves closer to W and shakes his head, letting the ball drop in front of W; D maintains his gaze on the

> ball. W backs up, and then moves forward to get the ball but, as she does, D moves toward the ball and grabs it in his mouth just as W reaches for it. D runs, with the ball, away from W.

Note the similarity between the project of "leading on" or enticement produced by the dog when he stood still as the person approached, moved closer to the person, or dropped the ball near the person, and that of the man in the first example, who exhibited the ball as remaining static or moved it closer to the dog until the dog lunged for it, or the woman in third example, who held the rag static or moved it closer to the dog until the dog jumped for it.

Dogs and people recognize the directionality of each other's projects and actions; if they did not, they would not be able to predict each other's actions. Much of this prediction is probably unconsciously processed by the organisms involved. For example, the dodges and ruses which both dogs and people use are done so quickly as to seem effortless. We think it is reasonable to say that dogs and people also recognize the intentionality present in action. Not surprisingly, people employ a rich intentional description and explanation of their own and dogs' actions.

The use of intentions to understand and predict dogs' actions and reactions is not an artifact of extrapolation from human experience (that is, this use is not an analogical extension of the term "intention"). All the criteria we need to decide that an organism's actions are intentional are exhibited by dogs (see Searle 1983; Russow, this volume). To say that the intentions are not real, but are just in our descriptions of the players' activities, is to miss the point.

> It is misleading to state these facts about actions in terms of descriptions of actions because it suggests that what matters is not the action but the way we describe the action, whereas, according to my account, what matters are the facts that the descriptions describe . . . (Searle 1983:101).

Searle (1983:101) continues:

> . . . it is no more puzzling . . . to ascribe intentional actions to animals than it is to ascribe visual perceptions to them. Suppose my dog is running around the garden chasing a ball; he is performing the intentional action of chasing the ball and the unintentional action of tearing up the lobelias, but this has nothing to do with anybody's descriptions. The dog certainly can't describe himself, and the facts would remain the same whether or not any human being ever did or could describe them.

While we view the actions of dogs and people to be intentional, further evidence is required to support the idea that dogs and people intend to deceive one another; specifically, to claim that they are intending to deceive we need evidence that dogs and people are intending to manipulate each other's mental states, rather than intending merely to manipulate each other's behavior. Some of the people we observed spoke of their belief that, when they were deceiving, they were manipulating the mental states of their play partners; further research on the development of these organisms' actions and reactions to one another may provide further evidence upon which to base this belief.

Play between dogs and people is made comprehensible when projects, goal-directedness, and expectations are assumed to operate in these organisms' actions and reactions. Because interpretations of actions during play may lead to false predictions, players may, by using actions to indicate particular consequences, create a context in which a false prediction seems the correct one. Deception seems an integral part of many players' projects, and is frequently exhibited in projects of enticement. Routines in play interactions derive from the interchange of the projects of players.

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